

SOME NOTES UPON THE TREATMENT OF INSANITY.

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A MAJORITY of the insane present evidences of physical ill-health, which condition has frequently preceded the attack of mental disease, and all who present them are materially benefitted by a course of medication aimed at this state. It seems highly probable, when we consider the many connections, marked sympathies, and far-reaching influences of the brain, that no person laboring under mental disease is in absolutely *good* bodily health, and though the impairment may be obscure, may be masked by the mental trouble, or not found through carelessness, it still exists. The physical ill-health may have caused the insanity, by inducing vaso-motor disturbances and qualitative or quantitative anaemia, and hence malnutrition of the convolutions. It may have been induced by the mental disease; as the brain, healthy or diseased, acts on every organ and tissue of the body, and when so induced reacts on the brain unfavorably. It may be an accidental complication. But in any case it *should* be sought for, and whenever found *must* be treated.

CONSTIPATION.

This is a common prelude and a usual attendant of insanity. It is often due to a lowered tone of the nervous system, comprehending deficient secretion and impaired contractility of the muscular coat of the bowels. In subjects predisposed to insanity, obstinate constipation seems

to act as an exciting cause. Constipation produces gloom in a healthy man, and nearly all melancholiacs are less depressed and maniacs less excited after a free movement from the bowels.

When constipation exists, we begin treatment with the administration of an ounce of castor oil or grs. v. of calomel, followed by a saline, and after a free purge employ some medicine regularly, if required, to insure a daily movement of the bowels. The best remedy for this purpose is ext. cascara sagrad. fl. at night, in doses of ℥xl. to i. which will usually move gently in the morning. The elixir rhamni frang. (or buckthorn bark) is valuable in this way. If the patient will take pills, the following are admirable:

B Ext. belladon.	grs. ij.
Ext. physos.....	grs. iiij.
Ext. nucis vom.....	grs. iiij.
Oleoresini capsici.....	grs. iiij.
Aloin.....	gr. i.
Ft. pil. no. xij. Sig. One or two at night.	

The belladonna and physostigma promote secretion and peristalsis; the nux vomica stimulates the muscular layer of the bowel and the central nervous system; the capsicum prevents griping (for this we may substitute ol. cajuputi), and the aloin acts upon the lower bowel.

Epsom salt, though valuable occasionally, should not be used continuously, as it promotes anæmia and hence weakens the individual.

Enemas are occasionally used, but not continually, as they do not sufficiently empty the upper bowel, do not act on secretion, and their administration is apt to create unpleasant delusions.

A most important means for the relief of habitual constipation is exercise in the open air, and another is diet. We should discontinue medicine for this purpose as soon as we find these means are sufficient. Out-door exercise promotes appetite and also peristalsis. As to diet, we should give fruit and green vegetables, regulate the amount of meat, give oatmeal, brown bread, and

prunes, and persuade the patient to suck an orange *before* breakfast. It will not do to cut down the amount of milk, and if it does constipate we will have to keep on using medicines. Kneading the abdomen will be found occasionally to antagonize the constipation from milk, without using medicines. We must not purge too freely or too often, as it weakens the patient very much, and this is especially true of salines. Clouston insists that a white tongue must not be considered an imperative indication to purge, as it may arise from want of food, depressed nervous energy, etc.

It is a good plan to construct a mixture having mild laxative properties, and containing some iron to combat anaemia, some nux vomica as a gastric and nervous tonic, and tonic doses of quinine. The following is useful:

B. Magnesii sulph.....	... $\frac{3}{4}$ ss.
Ferri sulph.....	... $\frac{3}{4}$ ij.
Quin. sulph.....	... $\frac{3}{4}$ ij.
Strychnine.....	... gr. ss.
Acid. sulph. dil..	... f. $\frac{3}{4}$ i.
Aquæ f. $\frac{3}{4}$ iv.
M. Sig. F. 3 i. in water, t. in d.	

In this preparation the amount of saline is too small to prove injurious.

THE DIARRHœA OF CONSTIPATION.

Many patients on admission to the hospital are found to be laboring under an attack of diarrhœa which astringents will not check. There will be a number of small watery, often nearly colorless, stools voided, the patient will be much prostrated, will complain of abdominal uneasiness or pain, headache, giddiness, dry tongue, and irritable stomach. This condition is due to a paretic condition of the bowel, causing the retention upon the sides of the tube of hardened fecal masses; the liquid portion passing through, and is most common in those cases which have been upon a course of opium. This condition is designated the diarrhœa of constipation, and is amended by several doses of castor oil and laudanum, Epsom salts

and sulphuric acid, or calomel and opium, producing several large stools, after which the diarrhoea will usually cease. In this complaint kneading of the abdomen does good, and stimulants are sometimes indicated.

INDIGESTION.

This induces gloom in a person mentally sound, and it never fails to aggravate the mental condition of a lunatic. Acid indigestion, due to fermentation, is quite common. An attack is relieved by an alkali after meals; but to cure, we use an acid before meals, and after meals one drop of carbolic acid, with grs. x. of subcarbonate of bismuth in aq. ment. pip., and mucil. of acacia (Bartholow). We must also exclude largely the starchy, saccharine, and fatty elements of the food. Tinct. nucis vom., gtts. x. before meals, t. in d., is very useful in preventing flatulence.

Atonic dyspepsia is much benefitted by f. $\frac{1}{2}$ ss. of whiskey before meals, and acid hydrochlor. dil. and pepsin after meals. Irritable stomach, with nausea and vomiting, is cured by saline mineral waters, drop doses of Fowler's sol. before meals, or the above-mentioned mixture of bismuth, carbolic acid, and peppermint water.

THE USE OF STIMULANTS.

Whiskey and brandy are employed in conditions of exhaustion, and, as a rule, abandoned when this condition ceases. Most cases of melancholia are distinctly improved by stimulants in small quantities, being by their aid reacted from exhaustion, roused from lethargy and gloom, given sleep, better appetite, and improved digestion. When the excitement of mania is prolonged and exhaustion arises, stimulants are very valuable. Alcohol will occasionally prevent frenzy in melancholia, and oppose suicidal tendencies. It must be used cautiously in these states, we being careful not to over-stimulate. As a rule we employ f. $\frac{1}{2}$ ij. or f. $\frac{1}{2}$ iij. of whiskey or brandy daily, combined preferably with milk or milk and eggs.

If given to secure sleep, a hot punch is the most eligible preparation.

When the exhaustion from mania is profound, in acute melancholia, and in maniacal delirium, stimulants in large quantities are indicated, ammonia being valuable in the form of aromatic spirits. When convalescence is established, stimulants are stopped, except occasionally a little claret for dinner, or a moderate quantity of some malt liquor.

Malt is by many highly esteemed, and probably would more properly be considered under the head of foods. It is a food, a tonic, and a promoter of appetite and digestion, and is administered after meals in the form of extract. Personally I am not inclined to think that it produces results as pronounced as have been claimed for it.

DIET.

It is of the most vital importance that cases of insanity be well nourished, and good feeding often stands between them and hopeless dementia or the grave. In many cases of insanity, the appetite is absent, and in many more it is capricious, though in mania and general paralysis they often eat voraciously. The tissue waste occurring during active insanity is enormous, and even when the appetite is fair the individual usually loses flesh. When secondary dementia has occurred, they may become obese. In active insanity give large quantities of milk; it is the very best of foods for them.

In mania, milk, two or three quarts a day or even more, eggs, stimulants if there is exhaustion, *moderate* quantity of animal food, and plenty of out-door exercise to promote appetite, digestion, peristalsis, and sleep. In melancholia, four to six quarts of milk in the twenty-four hours, giving part of it during the night. Give also eggs, fat-forming foods, chicken, fish, etc. Out-door exercise is indicated unless the case is exhausted, a regular life and not too much meat. Milk is our best food in any case, and even if it constipates do not stop it, but give something to keep the bowels open. Whenever the patient is exhausted, is

losing flesh rapidly, or is sleepless, give food during the night.

FORCIBLE FEEDING

Is not harsh but humane, as it often saves life or prevents hopeless dementia. We must employ it not only when the patient absolutely refuses food, but when an insufficient quantity is being taken. By holding a glass of milk to the lips and urging the patient, we may persuade them to take it. A china vessel with a long spout may be used, the spout being placed between the lips and liquid food poured in the mouth. An ordinary china teapot will answer for this purpose. The food in this case consists of milk alone, or variously combined with eggs, brandy, sherry, cream, etc. If this fails, employ the nasal tube. This apparatus has a central syringe-bulb of rubber, and a tube at each end. One end is introduced in liquid food, and the bulb filled; the other tube is oiled and carried along the floor of the nostril into the pharynx, and the food is then *slowly* pumped in. We do it slowly to avoid vomiting, and do not introduce much over a pint at one time. If the patient is eating nothing else, give three times during the day and once at night a pint of milk, two eggs, a couple of ounces of cream, possibly some brandy or sherry, and any medicine we desire to employ. If the patient eats *something*, we may have to use this method only once a day.

If this apparatus is not at hand, a rubber catheter, with a funnel in one end, will answer, the food being slowly poured in. This method is practised while the patient is held slightly reclining in a chair. We may fail to introduce the nose tube, and in fact some patients get a trick of pushing it into the mouth. If we cannot pass it, hold the mouth open with a wedge, and pass a larger tube into the oesophagus and feed through that, but the nasal tube plan is to be preferred.

COD-LIVER OIL

Is a valuable restorative agent. Phthisis is common among the insane, and it is our duty to combat body-

wasting, which favors the development of this disease. For this purpose oleum morrhuae is the best agent we possess. It is not only used in incipient phthisis, but is also valuable in cerebral softening, atheroma, etc. It is given in drachm doses, about two hours after meals, so that it will be subjected to duodenal digestion. Large doses are not well assimilated, and when we give them, oil can usually be found floating in the stools. If the oil is not well assimilated, give with each dose $\frac{1}{4}$ v. of ether, which, by stimulating the flow of pancreatic juice, will favor its emulsion, saponification, and absorption. If sick stomach arises from the use of the oil, combine with it a small quantity of strychnine. An emulsion is a good form in which to give oil (Borell's emulsion).

PHOSPHORUS

Is employed occasionally in secondary dementia, in chronic mania, melancholia, and conditions in which atheroma exists. Bartholow considers its chief use is found in conditions of cerebral anaemia, local or general. Phosphorus alone is not often used; it is apt to disorder the stomach, and its prolonged use is attended with the danger of fatty degenerations. It is usually given in pill form, each pill containing $\frac{1}{10}$ gr., and gr. $\frac{1}{5}$ being given t. in d. A tincture is occasionally employed. Its best results are obtained in incipient insanity and in secondary dementias.

The Com. Syr. of the Hypophosphites has been highly lauded, but, though it does some good, it has been overpraised. It is of use in states of poor nutrition, and probably acts on the nervous system more by improving the general health than by specific selection.

The syrup calcii lactophos. also finds some admirers. With this I have had no experience.

Acid Phosphate is composed of the phosphates of lime, magnesia, potash, and iron. The iron is a valuable addition, and whereas I question the specific action of this preparation on nervous matter, it does benefit it some through improvement of the general system.

The *Pyrophosphate* of Iron is one of the best of the phosphate preparations when anæmia is an element in the case. Employ gr. iv. doses, t. in d., usually combined with a little quinine, in dil. acid phosphor. and aromatic mixture. I have found this preparation of considerable value in alcoholic insanity.

QUININE.

Clouston gives it the first position as a tonic in melancholia. In acute mania and chronic mania large doses are not employed unless there is some special indication. We give tonic doses (from grs. ij. to grs. vi. daily) as a rule, and it is of great use in exhausted and anæmic conditions. In puerperal mania it is used (in large doses), in secondary dementia, and during convalescence. It may with advantage be combined with strychnine and iron in many cases. Do not give too much quinine, as it may, like strychnine, convert a condition of depression into one of exaltation. The rule is *tonic* doses, except when we combat some special condition, as high temperature or chills.

ARSENIC

Is a very valuable restorative agent, as it promotes the nutrition of the brain, nervous system, and body at large. It promotes appetite, digestion, and intestinal movements. It forms a valuable addition to a tonic mixture, and is to be particularly esteemed in softening with atheroma, in incipient insanity, in dementia, and in convalescence. Vertigo is very common among the insane, and if due to stomach trouble, arsenic will be found curative. For this purpose, and for irritable stomach, Fowler's sol. is used. To the bromide mixtures used for epilepsy it is well to add a little arsenic; it tends to prevent bromism, and acts as a stomachic and general tonic. During a course of arsenic the patient should be carefully watched, and every few weeks we should intermit its use, and give a purgative and a diuretic. In incipient melancholia, Fowler's sol. combined with stimulant doses of opium is

often useful. Arsenic can be combined with advantage with iron, quinine, and strychnine, as in the following; A pill, to be taken t. in d., containing gr. $\frac{1}{10}$ of arsenious acid, gr. $\frac{1}{2}$ of ext. nucis vom., grs. ij. of quinine, and grs. ij. of ferri redact.

IRON,

Our sheet anchor of treatment in anaemia. In strumous conditions (which commonly exist in idiots and imbeciles) use it in the form of syr. ferri iodidi. Iron, quinine, and strychnine is a good combination, and in exhausted states, beef, wine, and iron is both beneficial and pleasant. Iron is used, for at least a time, in most cases of insanity, and is especially valuable in puerperal and lactational insanities, insanity with amenorrhœa, and with tendencies to phthisis. In giving iron, it is often necessary to also employ some preparation daily to obviate the constipation.

DIGITALIS

Is, of course, valuable in heart troubles among the insane, but its field of usefulness in the treatment of mental disease is small. In acute delirious mania, and in puerperal mania, large doses do good. It is of benefit in some general paralytics with weak hearts, and seems to have power in repressing the episodes of excitement in this disease. It has been held up as a valuable agent in stupor, but in this state I have seen no mental improvement which could justly be attributed to the drug.

NUX VOMICA AND STRYCHNINE,

Valuable as a nerve and stomachic tonic. May give alone or with iron and quinine. Strychnine is of the greatest value in melancholia and in secondary dementia, but must be used with care, as it may convert depression into excitement and produce circular insanity. Excitement is a contra-indication to the use of strychnine in any considerable dose. It is most useful in depressed and sluggish states of mind.

NITRITE OF AMYL,

Valuable to prevent epileptic fits. Has been used in epileptic mania, sometimes with success, sometimes without. Spitzka praises it in stuporous melancholia, and in one case of this kind I saw it act wonderfully well. In stupor, about five drops are inhaled, t. in. d., watching its effects carefully, and stopping as soon as it causes very rapid action of the heart and marked flushing of the face. It is a very powerful remedy, must be used cautiously, and be only given after due consideration. It will often disappoint us.

NITROGLYCERIN

Resembles amyl in action. Make a solution of one drop of nitroglycerin in 100 drops of alcohol. Start with a dose of $\frac{1}{4}$ i. of this solution, and push up to $\frac{1}{2}$ v. or more until we get the physiological action. It is used in epilepsy, epileptic mania, and stupor.

If we give either amyl nitrite or nitroglycerin, do not at the same time give either strychnine, digitalis, or ergot, as they are antagonistic. Be very careful in their use in stupor, as the heart in this state is usually weak, and they produce increased cardiac action, and a great fall in the blood pressure. I am inclined to think that we are not often justified in using them in insanity, except for the treatment of some bodily state, as angina pectoris or Bright's disease.

BATHS.

Of course, employed at the dictate of cleanliness, but have other valuable uses.

The warm bath is very valuable in calming excitement in mania and melancholia. If there are indications of cerebral hyperæmia, conjoin with it cold applications to the head. The bath is used at bed-time, and should last from fifteen minutes to half an hour. The temperature should never be over 100° F., and it is better at 90° F. If it is very hot, or the patient is long retained in it, it may cause dangerous depression. These baths will

give sleep, promote secretions, and quiet excitement. Even when they fail to give sleep, they relax the system, and a small dose of some hypnotic will then often be efficient where large doses had previously failed. People with advanced heart trouble, or those profoundly exhausted, should not use them at all, or only for a short time. If much depression follows a bath, we must use stimulants. Cold to the head is often a valuable adjunct. We apply it by a rubber pipe, or by cloths kept wet with cold or even iced water.

In melancholia, short baths should be given daily for other purposes as well as securing sleep. The patient is rubbed down with coarse towels and alcohol, and the cutaneous circulation is thus stimulated.

The cold shower bath and cold bath must not be used, as they often hurry the patient into dementia. Turkish baths are highly praised by Clouston, and cold sponging, followed by friction, is often of use where there is sluggish capillary circulation.

Baths are only to be ordered by a physician, and should be supervised by him, as they have caused deaths.

CONIUM

Is not popular in this city. It has been much praised for its power in controlling muscular movements in acute mania. This it will do when given in considerable doses, by a paralyzing action upon motor nerves, but, though reducing motor excitement, it often increases cerebral. Just as in some epileptic insanities a violent muscular spasm serves as an outlet of nerve force which was before exploding on the psychic sphere, and stops the mania, so in acute mania the muscular movements are largely conservative, and to check them leads to increased mental trouble. Hence we should not stop them, unless temporarily, to effect a removal of the patient or in some other emergency, such as exhaustion arising from them, in which cases conium can be used.

Another bad result of the continued use of conium is that it destroys the appetite. In chronic mania it does no

good. I am satisfied that its administration should be the exception and not the rule, and that most cases of mania make an earlier and better recovery without it.

The combination of morphia and conium is, by some, held to be directly antagonistic to mania, but my experience with it is too limited to serve as a basis for correct judgment. In mania with chorea, conium finds warm advocates.

OPIUM AND MORPHIA.

In mania opium is not to be used, except as a very temporary expedient. If its use be continued in this state, it does harm, locks up the secretions, destroys appetite, hinders digestion, occasionally causes delirium, and helps to produce dementia. It usually takes a large dose in mania to produce sleep, and this may give rise to coma.

Opium is valuable in incipient melancholia in stimulant doses (ml iv.- ml v. of laudanum, t. in d.), and may substitute comfort for the mental depression. It is well to combine it with Fowler's sol., which prevents disorder of the stomach. At the same time feed well, take exercise, baths and friction, and secure sleep at night by chloral, bromide of sodium, or hot baths, and also use some laxative like cascara sagrada.

Opium or morphine is useful in melancholia to prevent frenzy, when we have a dilated pupil and soft pulse. They are best used in the day-time to secure quietness of mind, contracted pupils, etc.; sleep being secured at night by chloral, chloral and tinct. hyos., hot baths, etc. We must use a drug to prevent constipation, and as opium adds to the loss of appetite, we must insist on plenty of food, using forcible feeding, if required. We cut it down every few days as an experiment to see if frenzy returns. Stop the drug as soon as we can, without frenzy returning.

CHLORAL,

Our best hypnotic in many cases, and is useful in allaying excitement. It often procures from four to eight hours' sleep, and produces, as a rule, no unpleasant after-

feelings. It must be given carefully, as small doses may add to excitement, and large doses may cause dangerous depression of the heart. It should not be used continuously for any long period, as it weakens the brain and adds to dementia. It should not be used long in dementia, when the will is pronouncedly impaired, when there is weak heart, advanced phthisis, or when the patient is a drunkard. After using it for some time at night, the patient will occasionally be observed to be dazed, confused, and apathetic during the day, and when this is noted we must stop it. These symptoms are due to impaired brain strength, and if the drug is continued, pronounced and often incurable dementia will occur. Chloral should not be given continuously for long periods, and must not be given both day and night in the same case. To procure sleep, give grs. xx., and if need be, in one hour give grs. xx. more, but as a rule do not exceed this dose. We use it to produce sleep in any form of insanity, except to be careful to avoid much of it in dementia, or when the will is much weakened. It is used in epileptic mania, as an enema in status epilepticus, to quiet maniacs, and to allay the excitement of general paralytics. It occasionally disorders the stomach, but not nearly so surely as opium, and does not constipate.

A good combination, when there is much excitement particularly, is gr. xx. of chloral with f. ʒ i. tinct. hyos., repeated if required. This often quiets and secures sleep when chloral alone fails.

Chloral is sometimes combined with bromide of sodium or potassium. This is dangerous to a weak heart. If we do use it, employ the sodium salt in preference to the potassium. A patient taking chloral must not be under the influence of strychnine, as these drugs are antagonists.

HYOSCYAMUS

Tends to allay excitement and produce sleep. Its A. P., hyoscyamine, is used hypodermically. It is used in mania with great motor excitement, and will give sleep and often

permanently stop the excitement. Much more valuable than conium. Must be used carefully, and not at all in those weak and exhausted. It is not suited for prolonged administration, as it gives rise to headache, dimness of vision, anorexia and may increase hallucinations. It sometimes fails utterly. It acts well in the excitement of paresis. It is combined with chloral to produce sleep and allay excitement in a great variety of cases.

URETHAN

Resembles chloral, but does not appear to depress the heart. It produces no stomach disorder. It is given in doses of grs. xx. to grs. xxx., and I have seen 3 i. doses used in acute alcoholic insanity. It will often produce a quiet, refreshing sleep, but fails in power on repetition. There are no unpleasant after-effects. It is useful in mild melancholia, the premonitory wakefulness of insanity, and the excitement of idiocy, but fails in mania. Occasionally quiets in general paralysis.

PARALDEHYDE

In some cases acts wonderfully well, but in others appears almost inert. It is apt to seriously disorder the stomach, but may be given by the rectum with the yolk of an egg and mucil. acacia. By the mouth give ℥ xxx. to ℥ xl. in aquæ menth. pip., and by the rectum twice as much. It is suited to those cases which exhibit excitement with debility, hence to many cases in which chloral is not to be used. It is very valuable in some cases of acute delirious mania, and is best given by enema.

CANNABIS INDICA

Has a useful narcotic influence in many cases of excitement and depression. In small doses, in melancholia, it often rouses the patient from gloom and in large doses causes sleep. It is useful in chronic mania and may usually be combined with bromide with advantage in this state. The dose of the tinct. is from ℥ x. to f. 3 i., and we start with

the minimum dose and push up gradually. Hemp is well suited for prolonged administration, as it produces little or no disturbance of the stomach and other organs, neither does it predispose to dementia.

THE BROMIDES,

Given as pot. brom., sod. brom., ammon. brom., or a combination of them. Of high value to secure sleep in incipient insanity. Bromides are used in epilepsy and epileptic insanity for long periods. The trouble is that their prolonged use causes anaemia and gastric disorder, and predisposes to or develops dementia. Sod. brom. is the best salt and less likely to produce bromism. Do not use them continuously for long periods except in epileptic conditions. In acute mania the bromides alone will usually, and in chronic mania will often, fail to cause sleep. They are valuable often in epileptic mania, in simple delusional and hypochondriacal melancholia. After a hot bath has been given a case, a dose of bromide will often induce sleep.

A good combination to produce sleep is bromide of sodium or potassium, tinct. hyos. and ext. cannabis ind.

A combination with ergot is sometimes employed to combat epileptic mania and the maniacal outbreaks of paresis, and this combination is especially useful when great sexual excitement exists. Monobromate of camphor is valuable when this last-mentioned condition exists.

Blood-letting is not to be used for insanity. Antimonials are to be strictly avoided, and emetics are not employed.

HYOSCINE.

When I remember how much this drug has been praised, I am forced to consider it disappointing. The most extravagant claims have been made for it, but I am satisfied that, though of great value in some cases, its field of usefulness is limited. This statement is made with diffidence, as the weight of opinion is against it, but it is founded on

a number of observations, and at least in my hands the drug has not produced the magical results which some exhibit from minute doses. It is a most powerful agent, and has potent influences undoubtedly, but not always for good.

In acute mania it will induce sleep, but the sleep is not refreshing; in the morning the patient is exhausted, the pupils are dilated, the mouth is dry, there is muscular weakness, often tremor and inco-ordination, weak pulse, impaired or destroyed appetite, and often an increase of hallucinations.

In chronic mania, *small* doses will for a short time cause sleep, but very soon larger doses are required, and then we get the results noted above. Again, small doses not infrequently add to excitement.

I have seen cases of different forms of insanity, who had been taking for some time hyoscine by the mouth, the doses varying from gr. $\frac{1}{2}$ to gr. $\frac{1}{4}$ at night, who in the day-time exhibited some or all the above-noted unpleasant symptoms, have the drug entirely withdrawn, sleep as well or better, improve in appetite, and get rid of the other disagreeable features of its action.

In melancholia, I believe, its continuous use almost always does harm by weakening the will, impairing the appetite, increasing exhaustion, stimulating the production of hallucinations, and adding to gloom. It is useful for a time in violent mania in apparently robust people, in whom there is strong pulse and contracted pupils. It may produce sleep in this condition when other means fail, but even here its employment must not be continuous for any great length of time.

It is very efficient in any form of insanity, particularly if given hypodermically, in producing quiet, and hence the temptation to use it is strong on the ground of personal convenience, but do not use it so. Only employ it when there is some special indication.

In attacks of great violence, when we use only one or two doses, it is of the greatest value. It is so used with great advantage in epileptic mania, transitory mania,

maniacal furor, and the excitement of paresis. It is useful to give an occasional dose in ordinary mania to quiet destructive tendencies, but its use must not be prolonged. It may be used for a short time in melancholic frenzy, and when there are uncontrollable impulses towards suicide, to gain time for better measures. It is also useful when we wish to move a case.

The dose varies, particularly because of the fact that there are impure imitations of Merck's preparation upon the market. We should be sure it is Merck's. Start with a dose of gr. $\frac{1}{20}$ by the mouth to test the tolerance, and can rapidly push up to gr. $\frac{1}{10}$. Hypodermically we do not, as a rule, use over gr. $\frac{1}{20}$ of the pure article. I saw gr. $\frac{1}{8}$ hypodermically produce unpleasant symptoms in a case of agitated melancholia, there being marked prostration following its use.

Hyoscine in full dose hypodermically produces sleep in from eight minutes to fifteen minutes, which sleep is of uncertain duration. In violent mania it is usually of only an hour or two duration, but in dementes it will often continue for many hours. I repeat that it is of great value for occasional use, but must not be given continuously for a long time. If it is long given it hastens dementia.

It is best not to regularly employ these narcotics, sedatives, and hypnotics; we must be driven to their use, and remember that the sleep they produce is not worth one-quarter of the same length of natural sleep. The best sleep comes from air, food, and exercise. Often we must use these remedies, as the patient would die without them, but we stop them as soon as we can do so with safety.

I do not pretend in this article to exhibit all of the resources of treatment, but have merely considered some of the most common. I do not wish to appear dogmatic, nor to seem oracular, and I contribute this paper with diffidence, knowing I may expect contradiction, and merely reserving to myself the right to be adjudged as honest in my convictions.